

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
12 April 2001 (12.04.2001)

PCT

(10) International Publication Number
WO 01/26097 A1

(51) International Patent Classification⁷: **G11B 5/23**

(21) International Application Number: PCT/US00/27356

(22) International Filing Date: 4 October 2000 (04.10.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/157,883 5 October 1999 (05.10.1999) US

(71) Applicant (for all designated States except US): **SEA-GATE TECHNOLOGY, LLC** [US/US]; 920 Disc Drive, Scotts Valley, CA 95066 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KHIZROEV, Sakhrat** [RU/US]; 321 Jucunda Street, Pittsburgh, PA 15210 (US). **LITVINOV, Dmitri** [UA/US]; 1328 S.

Negley Avenue, Pittsburgh, PA 15217 (US). **KRYDER, Mark, Howard** [US/US]; P.O. Box 191, 4825 Wexford Run Road, Bradfordwoods, PA 15015 (US). **BAIN, James, A.** [US/US]; 1118 Lancaster Avenue, Pittsburgh, PA 15218 (US).

(74) Agent: **TOWNER, Alan, G.**; Eckert Seamans Cherin & Mellott, LLC, 44th floor, 600 Grant Street, Pittsburgh, PA 15219 (US).

(81) Designated States (national): JP, KP, KR, SG, US.

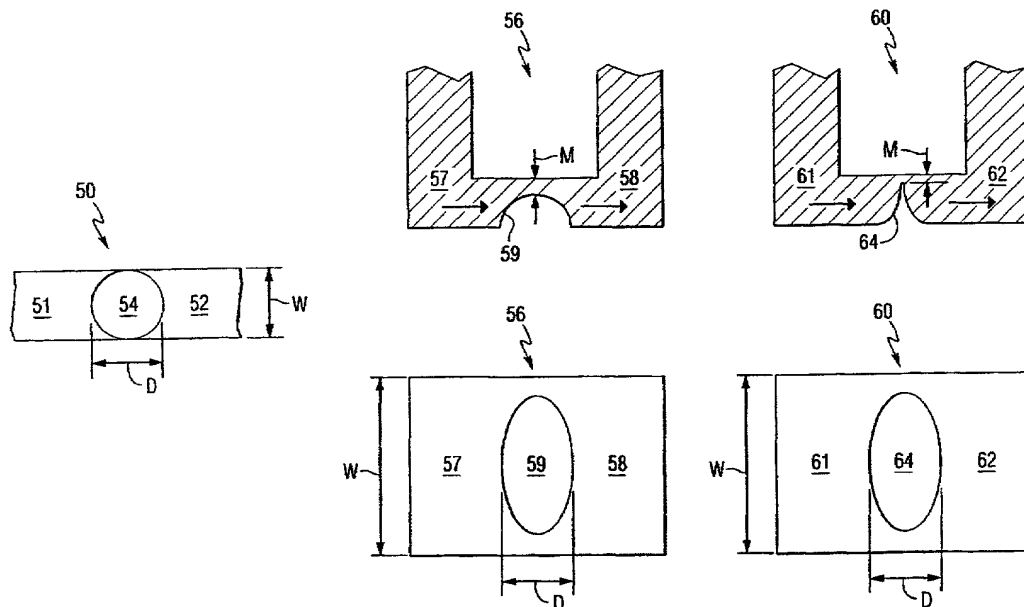
(84) Designated States (regional): European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published:

— With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: LONGITUDINAL MAGNETIC RECORDING HEADS WITH VARIABLE-LENGTH GAPS



(57) Abstract: A longitudinal recording head (50, 56, 60) for use with magnetic recording media includes a non-uniform gap (54, 59, 64) between first (51, 57, 61) and second magnetic (52, 58, 62) poles which focuses magnetic flux onto a small area of the magnetic recording medium. The non-uniform gap is preferably in the form of a cavity that is contoured to produce the desired flux pattern. Longitudinal recording heads incorporating the non-uniform gap are capable of improved recording densities.

WO 01/26097 A1